Introduction

The Behavior Risk Factor Surveillance System (BRFSS) is an ongoing surveillance program developed and partially funded by the Centers for Disease Control and Prevention (CDC). It is designed to estimate the prevalence of health risk factors for the major causes of death and disability in the United States, many of which are behavioral in nature. The BRFSS surveys have been conducted on a continuous basis since the early 1980s to determine the proportion of residents who engage in health behaviors that increase the probability of negative health outcomes. They provide state specific estimates of the proportion of adults aged 18 years and over for reporting health risk behaviors. These behavioral risk factor prevalence data provide a tool for evaluating health trends. They also helps assess the risk of chronic disease, and, they play a vital role in developing public policy and monitoring achievement of public health goals, such as Healthy People 2010.

Nebraska was one of the 29 states that participated in the BRFSS survey since the beginning. The Nebraska Health and Human Services System (NHHSS) is responsible for conducting the Behavior Risk Factor Survey for the entire state. Lincoln-Lancaster County Health Department has contracted with the NHHSS to conduct a separate Behavior Risk Factor Survey for Lancaster County. Our BRFSS follows the same protocol and methodology as designed by the CDC and adopted by the State of Nebraska.

The findings of this report stem from the results of the interviews conducted between 1993 and 2000. This report addresses major health risk factors, (such as smoking, alcohol consumption and physical inactivity), as well as preventive health behaviors, (such as receiving immunizations and cancer screening), health status, prevalence of diabetes, and health care issues, such as health insurance coverage. Additionally, this report summarizes trends in risk behavior over time.

Methodology

A. Sampling Design

Lancaster County BRFSS is a random sample telephone survey. Respondents were selected using random digit dialing from residential telephone exchanges in Lancaster County. When a residence has been contacted, one adult (18 years of age or older) is randomly selected to be interviewed from all adults residing in the household and is then interviewed in accordance with BRFSS protocol. Lancaster County Survey samples for 1993 to 1998 were pulled from Nebraska State BRFSS for these years because. Surveys from 1993 to 1995 and 1996 to 1998 were then combined to generate an adequate sample to overcome any problems associated with small sample size. However surveys for 1999 and 2000 were conducted specifically for Lancaster County with inadequate sample size and were analyzed separately. Telephone surveys with 4161 randomly selected Lancaster residents age 18 and older were conducted during 1993 to 2000.

B. Survey Instrument

The questionnaire is divided into three sections. The first section, or the core section, contains questions on health risk behavior; the second section contains demographic information; and the third contains optional modules. Although most of the core questions and demographic information were the same between years, optional modules varied from year to year.

Weighting of Data

Weighting is the procedure to correct the distributions in the sample data to approximate those of the population from which it is drawn. This is partly a matter of expansion and partly a matter of correction or adjustment for both non-response and non-coverage. It serves the purpose of providing data that look like the population rather than like the sample.

Weighting of BRFSS data, improves precision of prevalence estimates by performing three functions: it equalizes probability of being selected for the survey; it corrects for variation in age, race, sex groups between the sample and the population; and it permits generalization of the survey data to the entire population. BRFSS survey data collected from the respondents are initially unweighted data.

Because Lancaster County BRFSS employs a random digit dialed telephone survey, data were weighted to account for differences in the probability of selection. The number of different telephone numbers that reach each household and the number of adults in each household were considered in the weighting process. The rationale for weighting for number of phones comes from the fact that it is the telephone numbers that was sampled whereas statements are made about the people. Since each phone number within a stratum has equal probability of selection, the probability that a household will be called is proportional to the number of residential phones in the household. After adjusting the raw data to these three factors, the data were adjusted further using the Lancaster County age and sex group distribution so that the weighted sample data produce demographic distributions that correspond closely to the County population.

Data Analysis

After weighting the collected data for each year, surveys conducted though 1993-1995 and 1996-1998 were merged to generate two data sets for analysis. Surveys conducted in 1999 and 2000 were analyzed separately after weighting. All data analysis was performed using SPSS (ver10).

This report presents the percentage of high-risk behavior within each demographic group. The demographic variables use to analyze the survey data and present this report includes sex, age group, education, household income, and race.

Survey Limitations

The BRFSS survey relies on self-reported data and has certain limitations. These limitations, therefore, should be understood in the interpretation of the data. Respondents might under report some behaviors that may be considered socially unacceptable, unhealthy, or even illegal. Conversely, respondents might over-report desirable behaviors. Respondents might not recall past behaviors and fail to respond to a question accurately. A question may not mean the same thing to different respondents, and some respondents may not respond at all.

The BRFSS survey excludes households without telephones and does not attempt to contact institutionalized people at all, which might result in selection bias due to under-representation of certain segments of the population. The possibility that people not interviewed for this reason also lent considerable bias to the survey sample.

Additionally, breaking down the data into smaller categories (such as demographic groups) decreased the sample size of the original risk factor categories, thereby decreasing the ability to determine statistically significant differences. Finally, it should be noted that weighting the data by age and sex distribution was done in order to correct for over- or under-representation of all groups. Prevalence based on denominators of less than fifty respondents was considered statistically unreliable.